

the antecedent basis for the noted phrases, by this Amendment the noted problems have been corrected in a self-evident manner.

In the *Claim Rejections* - 35 USC § 102 section of the Detailed Action, claims 1-5, 13-14, 16-22, 29-38, and 41-43 were all rejected as being anticipated by Colley (US. 5,283,733). In making this rejection, the examiner contends that each of the terminals 3 taught by Colley is "each provided with data indicative of its location".

The applicant respectfully disagrees with this contention. Colley teaches two approaches. Firstly, the units 5 carried by each respective player can transmit a signal indicative of each stroke of that player to a central database via terminals 3; the central database being informed that a hole has been completed by the respective player by use of an "electronic ball/cup sensor" 22 which signal is again transmitted from the player's unit 5 through the terminals 3 (together with an identifying signal for that player). Alternatively, the respective player via his respective player's unit may provide the whole-completion signal before teeing off on the next hole.

Nowhere is it taught that each respective player's unit "knows" its own location. Indeed, the above two approaches strongly imply or teach the opposite. In particular, if the respective units of Colley did know at which or each hole they were located, it would not be necessary for that player or a cup sensor to indicate the completion of a hole; rather, the commencement of a subsequent hole would make it clear that the previous hole had been completed. It is submitted, therefore, that the disclosure of Colley in fact teaches *against* each unit "knowing" where it is located, that is, being provided with data indicative of its location as defined in the present invention.

In addition, it is not taught that any scoring terminal 3 knows its own location. Rather, each terminal is described as being used for "wireless" communication with the player's unit 5 via the transceiver 7 "at every scoring terminal 3" (column 3, lines 13-14). While the terminal 3 is disclosed as being usable by a keyboard and for providing a display, print-out or speaker, this would hardly be usable by a player to record a score since it would render the player's unit 5 unnecessary and further would require the player to remember the code which he has been assigned at each data entry. In addition, there is no disclosure that the scoring terminal being used would know what hole the player was entering data for, even if such data were capable of being entered

(which it probably would not to avoid entry of false data by others as the Colley system is designed for use by spectators at large events for real-time display of tournament results).

Independent claim 1 of the present application claims that each of the data input means for entering sport or game progress data remotely is "provided with data indicative of a respective location thereof", and the other independent claims (claims 17, 30 and 31) each includes a comparable feature. It is submitted that Colley is entirely silent on this feature and, in fact, teaches against it. Accordingly, it is submitted that independent claims 1, 17, 30 and 31 and all (of the remaining) claims depending therefrom are novel and inventive over the disclosure of Colley.

In the *Claim Rejections - 35 USC § 102* section of the Detailed Action, the examiner also cites Born *et al.* (US 5,949,679) against the novelty of claims 1 to 5, 13-14, 16-22, 29-38 and 41-43. Born *et al.* appears to disclose terminals at each of a plurality of golf holes; and its abstract uses the expression "associated with a hole" of a golf course. The Examiner again contends that this document discloses that "each of said terminals is provided with data indicative of its location", but does not indicate where this feature is described.

In fact, this feature does not appear to be disclosed or taught in Born *et al.* While Born *et al.* teach the transmission of raw scores to a central database and that the raw score is "typically packaged in a data structure including the address of the main computer 14 and a message including the raw score, a hole identifier, and a participant identifier" (column 14 lines 4-6), this does not imply that the terminal is itself provided with "data indicative of its location". There is no other reference in this prior art document to "hole identifier", or any suggestion that the terminal itself "knows" where it is located. It is thus submitted that a skilled person would conclude that each player must, at each hole, enter the hole's identity in the same way that any other data (e.g. his or her identity and the raw score) are entered, so that this information can be packaged and transmitted to the main computer.

There is thus no disclosure in Born *et al.* that the terminal or data input device itself "knows" its location. Providing "data indicative of a respective location thereof" to each data input device (as defined in the claims of the present application) ensures that

no error can occur in the location pertaining to score data; and, perhaps more trivially but still importantly, ensures that less time is required for a player to enter data at the completion of each portion (e.g., hole) of a game.

It is submitted, therefore, that the present invention as defined in the claims of the present application is novel and inventive over the disclosure of Born *et al.*

In the *Claim Rejections - 35 USC § 103* section of the Detailed Action, the examiner rejects claims 6-12, 23-28, and 39-40 as obvious over either Colley or Born *et al.* in view of Lyon (US 6,074,312). The examiner contends that Lyon teaches the use of a smart card and a smart card reader for input and storage of data pertaining to the golfers.

However, it is important to note that neither Colley nor Born *et al.* disclose data input devices that are compatible with the use of a smart card or which suggests the use of a smart card reader. Colley, for example, teaches a system in which the user inputs data principally by means of a portable "player's unit 5" that fastens on a belt or is otherwise carried. There is rarely, if any, need for a player to directly interact with the terminal and, if this is necessary, a suitable keyboard is provided. The entire thrust of Colley is therefore the convenience of the player's unit, allowing the player complete freedom of movement generally without any need for physical interaction with the terminal. Providing such a terminal, therefore, with a smart card reader or writer is entirely redundant and contrary to the teachings of Colley so that such an addition would not be obvious. A player using the system of Colley does not need to identify him or herself at a terminal (by a smart card or otherwise), so there is no reason to suppose that a skilled person would regard Colley and the teaching of Lyon as compatible, or be prompted to make a system drawing on both disclosures.

Similar remarks may be made concerning the suggested combination of Born *et al.* and Lyon. Born *et al.* explicitly teach data input devices in the form of remote computers 14. These remote computers are described at column 5 lines 5 to 12 and appear in every respect to comprise conventional PCs or the like. Such computers have well established data entry mechanisms comprising typically a keyboard and optionally a mouse, and are not commonly known to be provided with a smart card reader or writer. Further, a PC also has a range of widely accepted portable data

storage means (such as floppy disks and CD ROMs), obviating the need for an additional portable data storage means such as a smart card. There is therefore no reason why the teaching of Born *et al.* would be combined with that of Lyon, the technology of each being designed for entirely distinct applications. It is submitted, therefore, that the suggested combination of Born *et al.* and Lyon is taught against by the nature of the apparatus disclosed in each document, and that accordingly a person of ordinary skill could not reasonably be expected to combine their disclosures as suggested by the Examiner.

It is accordingly submitted that for these additional reasons, claims 6-12, 23-28, and 39-40 are inventive over the suggested combination of documents.

The remaining references which were cited but not applied have been reviewed but are not believed to be pertinent to the patentability of the present invention.

For all of the foregoing reasons, it is submitted that the present application is in condition for allowance and such action is solicited.

Respectively Submitted,

Date: December 30, 2002

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ATTACHMENT A

Clean Replacement Claims (entire set of pending claims)

Following herewith is a clean copy of the entire set of pending claims.

1. (twice amended) A sport or game progress data collection system including:
an electronic central data collection means for accumulating, storing and manipulating data;
a plurality of respective data input means for entering sport or game progress data remotely, each said data input means being respectively distributed about a field of play of said sport or game so that one or more of said data input means are respectively located in association with each of a plurality of phases of said sport or game, and each of said data input means being provided with respective data indicative of a respective location thereof; and
communications means for communicating between each of said respective data input means and said central data collection means;
whereby progress data corresponding to a respective one of said phases of said sport or game can be entered by a person into any of said one or more data input means located in association with said respective phase, and wherein the progress data so entered is transmitted to said central data collection means and respective said data indicative of said respective location of the respective data input means transmitting the progress data is also transmitted to said data collection means.
2. A data collection system as claimed in claim 1, wherein said system is to transmit further data from said data collection means to one or more of said data input means.
3. A data collection system as claimed in claim 1, wherein each of said data input means includes identification means for tagging any data entered into said data input means with a data tag.
4. (amended) A data collection system as claimed in claim 3, wherein said data

collection means includes memory means for storing said data associated with said tag.

5. A data collection system as claimed in claim 3, wherein said tag indicates an identity of a person entering said data.

6. A data collection system as claimed in claim 1, wherein each of said data input means includes card reading means for reading a data card.

7. (amended) A data collection system as claimed in claim 6, wherein said data card stores a data tag.

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8. (amended) A data collection system as claimed in claim 1, wherein each of said data input means includes card writing means, for storing data onto a data card, whereby said stored data may be data transmitted from said data collection means.

9. A data collection system as claimed in claim 8, wherein said card writing means comprises a smart card writing means.

10. A data collection system as claimed in claim 6, wherein said card reading means comprises a smart card reading means.

11. A data collection system as claimed in claim 10, wherein each of said data input means is operable to associate any data entered into said data input means with a reference read by said smart card reading means from a smart card.

12. A data collection system as claimed in claim 11, wherein said reference corresponds to the identity of a person entering said data and in possession of said smart card.

13. A data collection system as claimed in claim 1, wherein said data comprises golf score data.

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14. A data collection system as claimed in claim 1, wherein each of said data input means includes a data entry terminal including a keyboard or keypad and visual display unit.

15. A data collection system as claimed in claim 1, wherein each of said data input means includes a proximity sensing means to detect when a user approaches one of said data input means, so that portions of said system can automatically power up only when required by said user and to identify the location of said user or of said data input means.

16. A data collection system as claimed in claim 1, wherein said communication means includes a wireless communication means.

17. (twice amended) A golf scoring system including:
a central score collection computer for accumulating, storing and manipulating golf scores;
a plurality of respective score input terminals for entering golf score data remotely, each said terminal being respectively distributed about a golf course so that one or more of said terminals are respectively located in association with each hole of said course, and each of said respective terminals is provided with respective data indicative of a respective location thereof; and
communications means for communicating between each of said respective terminals and said central computer;
whereby golf score data corresponding to a respective one of said holes can be entered into any of said one or more terminals located in association with said respective hole, and wherein said golf score data so entered and respective said data indicative of said respective location of said respective terminal where said golf score data is entered are transmitted to said central computer.

18. A golf scoring system as claimed in claim 17, wherein said communications means

includes radio communication means so that said terminals and said central computer can communicate wirelessly.

19. (amended) A golf scoring system as claimed in claim 17, wherein said communication means is a two way communication means so that said central computer can transmit data including cumulative scores and/or handicaps to said terminals.
20. A golf scoring system as claimed in claim 17, wherein each of said terminals includes identification means for tagging each of said scores entered into said terminals with a corresponding data identity tag.
21. A golf scoring system as claimed in claim 20, wherein said central computer is operable to store said data identity tags associated with said scores.
22. A golf scoring system as claimed in claim 20, wherein each of said tags indicates an identity of a person entering the corresponding of said scores.
23. A golf scoring system as claimed in claim 17, wherein each of said terminals includes a smart card reader, for reading data from a smart card.
24. A golf scoring system as claimed in claim 17, wherein each of said terminals includes a smart card writer, for storing data onto a smart card.
25. A golf scoring system as claimed in claim 24, wherein said stored data is data transmitted from said central computer, such as cumulative core data or handicap data.
26. A golf scoring system as claimed in claim 24, wherein said system includes said smart card.
27. A golf scoring system as claimed in claim 23, wherein each of said terminals is

operable to associate any data entered into said terminal with a reference read by said smart card reader from said smart card.

28. (amended) A golf scoring system as claimed in claim 27, wherein said reference corresponds to the identity of a person entering said score and in possession of said smart card.

29. (amended) A golf scoring system as claimed in claim 17, wherein said central computer is connected to a computer network so that (a) data stored on said central computer can be accessed remotely or (b) said central computer can access golf data stored remotely.

30. (twice amended) A golf scoring system including:

a golf course with a club house;

a central score collection computer for accumulating, storing and manipulating golf scores, located in said club house;

a plurality of respective score input terminals for entering golf score data remotely and for distribution respectively about said golf course so that one or more of said terminals are respectively located in association with each hole of said course, and each of said respective terminals is provided with respective data indicative of a respective location thereof; and

wireless communications means for communicating between each of said respective terminals and said central computer;

whereby golf score data corresponding to a respective one of said holes can be entered into any of said one or more terminals located in association with said respective hole, and wherein said golf score data so entered and respective said data indicative of said respective location of said respective terminal where said golf score data is entered are transmitted to said central computer.

31. (twice amended) A method for golf scoring including the steps of:

progressively entering a respective golf score data corresponding to a respective

hole of a golf course into a respective score input terminal located in association with said respective hole;

transmitting each respective said golf score data and respective data indicative of a location of each said respective terminal from each respective said terminal to a central score collection computer for accumulating, storing and manipulating of the respective transmitted golf scores; and

storing each respective transmitted said golf score data on said central computer.

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32. A method for golf scoring as claimed in claim 31, including calculating a cumulative score by means of said central computer.

33. A method for golf scoring as claimed in claim 32, including transmitting said cumulative score from said central computer to said input terminal.

34. A method for golf scoring as claimed in claim 31, including calculating handicap data by means of said central computer.

35. A method for golf scoring as claimed in claim 34, including transmitting said handicap data from said central computer to said terminal.

36. A method for golf scoring as claimed in claim 31, including distributing a plurality of said input terminals on a golf course.

37. A method for golf scoring as claimed in claim 36, including progressively entering said score after each hole of said golf course.

38. A method for golf scoring as claimed in claim 31, including entering identification data into said input terminal associated with said score and storing said score and data calculated therefrom identified by means of said identification data.

39. A method for golf scoring as claimed in claim 38, wherein said entering

identification data includes reading said identification data from a smart card.

40. A method for golf scoring as claimed in claim 39, including storing said score on said smart card.

41. A system as claimed in claim 1, including means for displaying said progress data and the location of said respective data input means.

42. A system as claimed in claim 17, including means for displaying said golf scores and the location of said respective terminal.

43. A method as claimed in claim 31, including displaying said golf scores and the location of said respective terminal.

ATTACHMENT B

Marked Up Replacement Claims

Following herewith is a marked up copy of each rewritten claim together with all other pending claims.

1. (twice amended) A sport or game progress data collection system including:
 - an electronic central data collection means for accumulating, storing and manipulating data;
 - a plurality of respective data input means for entering sport or game progress data remotely, each said data input means being respectively distributed about a field of play of said sport or game so that one or more of said data input means are respectively located in association with each of a plurality of phases of said sport or game, and each of said data input means being provided with respective data indicative of its-a respective_location_thereof; and
 - communications means for communicating between each of said respective data input means and said central data collection means;
 - whereby progress data corresponding to a respective one of said phases of said sport or game can be entered by a person into any of said one or more data input means located in association with said respective phase, and wherein the progress data so entered is transmitted to said central data collection means and respective said data indicative of said respective location of the respective data input means transmitting the progress data is also transmitted to ef said respective-data collection means.
2. A data collection system as claimed in claim 1, wherein said system is to transmit further data from said data collection means to one or more of said data input means.
3. A data collection system as claimed in claim 1, wherein each of said data input means includes identification means for tagging any data entered into said data input means with a data tag.
4. (amended) A data collection system as claimed in claim 43, wherein said data

collection means includes memory means for storing said data associated with said tag.

5. A data collection system as claimed in claim 3, wherein said tag indicates an identity of a person entering said data.

6. A data collection system as claimed in claim 1, wherein each of said data input means includes card reading means for reading a data card.

7. (amended) A data collection system as claimed in claim 6, wherein said data card stores said-a data tag.

8. (amended) A data collection system as claimed in claim 1, wherein each of said data input means includes card writing means, for storing data onto a data card, whereby said stored data may be data transmitted from said data collection means.

9. A data collection system as claimed in claim 8, wherein said card writing means comprises a smart card writing means.

10. A data collection system as claimed in claim 6, wherein said card reading means comprises a smart card reading means.

11. A data collection system as claimed in claim 10, wherein each of said data input means is operable to associate any data entered into said data input means with a reference read by said smart card reading means from a smart card.

12. A data collection system as claimed in claim 11, wherein said reference corresponds to the identity of a person entering said data and in possession of said smart card.

13. A data collection system as claimed in claim 1, wherein said data comprises golf score data.

14. A data collection system as claimed in claim 1, wherein each of said data input means includes a data entry terminal including a keyboard or keypad and visual display unit.

15. A data collection system as claimed in claim 1, wherein each of said data input means includes a proximity sensing means to detect when a user approaches one of said data input means, so that portions of said system can automatically power up only when required by said user and to identify the location of said user or of said data input means.

16. A data collection system as claimed in claim 1, wherein said communication means includes a wireless communication means.

17. (twice amended) A golf scoring system including:
a central score collection computer for accumulating, storing and manipulating golf scores;
a plurality of respective score input terminals for entering golf score data remotely, each said terminals being respectively distributed about a golf course so that one or more of said terminals are respectively located in association with each hole of said course, and each of said respective terminals is provided with respective data indicative of its a respective location thereof; and
communications means for communicating between each of said respective terminals and said central computer;
whereby golf score data corresponding to a respective one of said holes can be entered into any of said one or more terminals located in association with said respective hole, and wherein said golf score data so entered and respective said data indicative of said respective location of said respective terminal where said golf score data is entered are transmitted to said central computer.

18. A golf scoring system as claimed in claim 17, wherein said communications means

includes radio communication means so that said terminals and said central computer can communicate wirelessly.

19. (amended) A golf scoring system as claimed in claim 17, wherein said communication means is a two way communication means so that said central computer can transmit data including cumulative scores and/or handicaps to said terminals.
20. A golf scoring system as claimed in claim 17, wherein each of said terminals includes identification means for tagging each of said scores entered into said terminals with a corresponding data identity tag.
21. A golf scoring system as claimed in claim 20, wherein said central computer is operable to store said data identity tags associated with said scores.
22. A golf scoring system as claimed in claim 20, wherein each of said tags indicates an identity of a person entering the corresponding of said scores.
23. A golf scoring system as claimed in claim 17, wherein each of said terminals includes a smart card reader, for reading data from a smart card.
24. A golf scoring system as claimed in claim 17, wherein each of said terminals includes a smart card writer, for storing data onto a smart card.
25. A golf scoring system as claimed in claim 24, wherein said stored data is data transmitted from said central computer, such as cumulative core data or handicap data.
26. A golf scoring system as claimed in claim 24, wherein said system includes said smart card.
27. A golf scoring system as claimed in claim 23, wherein each of said terminals is

operable to associate any data entered into said terminal with a reference read by said smart card reader from said smart card.

28. (amended) A golf scoring system as claimed in claim 27, wherein said reference corresponds to the identity of a person entering said score and in possession of said smart card.

29. (amended) A golf scoring system as claimed in claim 17, wherein said central computer is connected to a computer network so that (a) data stored on said central computer can be accessed remotely and/or (b) said central computer can access golf data stored remotely.

30. (twice amended) A golf scoring system including:

a golf course with a club house;

a central score collection computer for accumulating, storing and manipulating golf scores, located in said club house;

a plurality of respective score input terminals for entering golf score data remotely and for distribution respectively about said golf course so that one or more of said terminals are respectively located in association with each hole of said course, and each of said respective terminals is provided with respective data indicative of its-a respective location thereof; and

wireless communications means for communicating between each of said respective terminals and said central computer;

whereby golf score data corresponding to a respective one of said holes can be entered into any of said one or more terminals located in association with said respective hole, and wherein said golf score data so entered and respective said data indicative of said respective location of said respective terminal where said golf score data is entered are transmitted to said central computer.

31. (twice amended) A method for golf scoring including the steps of:

progressively entering a respective golf score data corresponding to a respective

hole of a golf course ~~remotely~~ into a respective score input terminal located in association with said respective hole;

transmitting each respective said golf score data and respective data indicative of ~~the-a~~ location of each said respective terminal from each respective said terminal to a central score collection computer for accumulating, storing and manipulating of the respective transmitted golf scores; and

storing each respective transmitted said golf score data on said central computer.

32. A method for golf scoring as claimed in claim 31, including calculating a cumulative score by means of said central computer.

33. A method for golf scoring as claimed in claim 32, including transmitting said cumulative score from said central computer to said input terminal.

34. A method for golf scoring as claimed in claim 31, including calculating handicap data by means of said central computer.

35. A method for golf scoring as claimed in claim 34, including transmitting said handicap data from said central computer to said terminal.

36. A method for golf scoring as claimed in claim 31, including distributing a plurality of said input terminals on a golf course.

37. A method for golf scoring as claimed in claim 36, including progressively entering said score after each hole of said golf course.

38. A method for golf scoring as claimed in claim 31, including entering identification data into said input terminal associated with said score and storing said score and data calculated therefrom identified by means of said identification data.

39. A method for golf scoring as claimed in claim 38, wherein said entering

identification data includes reading said identification data from a smart card.

40. A method for golf scoring as claimed in claim 39, including storing said score on said smart card.
41. A system as claimed in claim 1, including means for displaying said progress data and the location of said respective data input means.
42. A system as claimed in claim 17, including means for displaying said golf scores and the location of said respective terminal.
43. A method as claimed in claim 31, including displaying said golf scores and the location of said respective terminal.